

SAFETY DATA SHEET

Creation Date 16-Jun-2009

Revision Date 24-Dec-2021

Revision Number 9

1. Identification

| | |
|-----------------------------|---|
| Product Name | Acetonitrile |
| Cat No. : | A998SS50, A998SS28, A998212, A998POP50, A998N219, A998N119, A998RS28, A998RS19, A998SS200, A998SS115, A998RS50, A998RS115, A998SK4, A998SK1, A9984LC, A99818, A9984, A998RS200, A9981, A998SS1350; NC0320219; XXA998U200LI; NC1449681; A998RS-1350ASME; NC1561776; A998RS200ASME; NC1568700; XXA998U20LI; NC1929425; NC2054219; A998RS1250; NC2962041 |
| CAS No | 75-05-8 |
| Synonyms | AN; Methyl cyanide; Ethanenitrile |
| Recommended Use | Laboratory chemicals. |
| Uses advised against | Food, drug, pesticide or biocidal product use. |

Details of the supplier of the safety data sheet

Company

Fisher Scientific Company
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887
For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|------------------------------------|------------|
| Flammable liquids | Category 2 |
| Acute oral toxicity | Category 4 |
| Acute dermal toxicity | Category 4 |
| Acute Inhalation Toxicity - Vapors | Category 4 |
| Serious Eye Damage/Eye Irritation | Category 2 |

Label Elements**Signal Word**

Danger

Hazard Statements

Highly flammable liquid and vapor

Causes serious eye irritation

Harmful if swallowed, in contact with skin or if inhaled

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapors/spray

Keep away from heat/sparks/open flames/hot surfaces. - No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Response

Get medical attention/advice if you feel unwell

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

Skin

Call a POISON CENTER or doctor/physician if you feel unwell

Wash contaminated clothing before reuse

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical advice/attention

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

FireIn case of fire: Use CO₂, dry chemical, or foam for extinction**Storage**

Store in a well-ventilated place. Keep cool

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|--------------|---------|----------|
| Acetonitrile | 75-05-8 | >95 |

4. First-aid measures

| | |
|--|---|
| General Advice | Immediate medical attention is required. Show this safety data sheet to the doctor in attendance. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. |
| Inhalation | Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Most important symptoms and effects | Difficulty in breathing. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Metabolism may release cyanide, which may result in headache, dizziness, weakness, collapse, unconsciousness, and possible death: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|--|
| Suitable Extinguishing Media | Water spray. CO ₂ , dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers. |
| Unsuitable Extinguishing Media | Water may be ineffective, Do not use a solid water stream as it may scatter and spread fire |
| Flash Point | 12.8 °C / 55 °F |
| Method - | No information available |
| Autoignition Temperature | 525 °C / 977 °F |
| Explosion Limits | |
| Upper | 16 vol % |
| Lower | 3 vol % |
| Oxidizing Properties | Not oxidising |
| Sensitivity to Mechanical Impact | No information available |
| Sensitivity to Static Discharge | No information available |

Specific Hazards Arising from the Chemical

Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

Hazardous Combustion Products

Hydrogen cyanide (hydrocyanic acid). Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPAHealth
2Flammability
3Instability
0Physical hazards
N/A**6. Accidental release measures****Personal Precautions**

Remove all sources of ignition. Take precautionary measures against static discharges. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment as required.

Environmental Precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up

Remove all sources of ignition. Take precautionary measures against static discharges. Provide adequate ventilation. Use spark-proof tools and explosion-proof equipment. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Prevent product from entering drains.

7. Handling and Storage**Handling**

Wear personal protective equipment/face protection. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Storage.

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Incompatible Materials. Strong oxidizing agents. Strong acids. Reducing Agent. Bases.

8. Exposure controls / personal protection**Exposure Guidelines**

| Component | ACGIH TLV | OSHA PEL | NIOSH | Mexico OEL (TWA) |
|--------------|---------------------|---|--|------------------|
| Acetonitrile | TWA: 20 ppm Skin | (Vacated) TWA: 40 ppm (Vacated) TWA: 70 mg/m ³ (Vacated) TWA: 5 mg/m ³ (Vacated) STEL: 60 ppm (Vacated) STEL: 105 mg/m ³ TWA: 40 ppm TWA: 70 mg/m ³ | IDLH: 137 ppm IDLH: 25 mg/m ³ REL = 20 ppm (TWA) REL = 34 mg/m ³ (TWA) | TWA: 20 ppm |

Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment.

Personal Protective Equipment**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

| | |
|---------------------------------|---|
| Respiratory Protection | Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. |
| Recommended Filter type: | low boiling organic solvent. Type AX. Brown. conforming to EN371. |
| Hygiene Measures | When using do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. |

9. Physical and chemical properties

| | |
|---|--|
| Physical State | Liquid |
| Appearance | Colorless |
| Odor | aromatic |
| Odor Threshold | 170 ppm |
| pH | Not applicable |
| Melting Point/Range | -46 °C / -50.8 °F |
| Boiling Point/Range | 81 - 82 °C / 177.8 - 179.6 °F @ 760 mmHg |
| Flash Point | 12.8 °C / 55 °F |
| Evaporation Rate | 5.79 |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | 16 vol % |
| Lower | 3 vol % |
| Vapor Pressure | 97 mbar @ 20 °C |
| Vapor Density | 1.42 |
| Specific Gravity | 0.781 |
| Solubility | miscible |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | 525 °C / 977 °F |
| Decomposition Temperature | No information available |
| Viscosity | 0.36 cP at 20 °C |
| Molecular Formula | C ₂ H ₃ N |
| Molecular Weight | 41.05 |

10. Stability and reactivity

| | |
|---|--|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. Keep away from open flames, hot surfaces and sources of ignition. Exposure to moisture. |
| Incompatible Materials | Strong oxidizing agents, Strong acids, Reducing Agent, Bases |
| Hazardous Decomposition Products | Hydrogen cyanide (hydrocyanic acid), Nitrogen oxides (NO _x), Carbon monoxide (CO), Carbon dioxide (CO ₂) |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Product Information Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-----------|-----------|-------------|-----------------|
|-----------|-----------|-------------|-----------------|

| | | | |
|--------------|---|-------------------------|---|
| Acetonitrile | 450-787 mg/kg (Rat) 2460 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | LC50 = 3587 ppm (6.022 mg/l) (Mouse) 4h LC50 = 16,000 ppm (26.8 mg/l) (Rat) 4h |
|--------------|---|-------------------------|---|

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Irritating to eyes

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS No | IARC | NTP | ACGIH | OSHA | Mexico |
|--------------|---------|------------|------------|------------|------------|------------|
| Acetonitrile | 75-05-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Metabolism may release cyanide, which may result in headache, dizziness, weakness, collapse, unconsciousness, and possible death: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|--------------|------------------|---|--|------------|
| Acetonitrile | Not listed | LC50: = 1850 mg/L, 96h static (Lepomis macrochirus) LC50: = 1000 mg/L, 96h static (Pimephales promelas) LC50: 1600 - 1690 mg/L, 96h flow-through (Pimephales promelas) LC50: = 1650 mg/L, 96h static (Poecilia reticulata) | EC50 = 28000 mg/L 48 h EC50 = 73 mg/L 24 h EC50 = 7500 mg/L 15 h | Not listed |

Persistence and Degradability Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its volatility.

| Component | log Pow |
|--------------|---------|
| Acetonitrile | -0.34 |

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

| Component | RCRA - U Series Wastes | RCRA - P Series Wastes |
|------------------------|------------------------|------------------------|
| Acetonitrile - 75-05-8 | U003 | - |

14. Transport information

DOT

UN-No UN1648
 Proper Shipping Name ACETONITRILE
 Hazard Class 3
 Packing Group II

TDG

UN-No UN1648
 Proper Shipping Name ACETONITRILE
 Hazard Class 3
 Packing Group II

IATA

UN-No UN1648
 Proper Shipping Name ACETONITRILE
 Hazard Class 3
 Packing Group II

IMDG/IMO

UN-No UN1648
 Proper Shipping Name ACETONITRILE
 Hazard Class 3
 Packing Group II

15. Regulatory Information

United States of America Inventory

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|--------------|---------|------|---|-----------------------------|
| Acetonitrile | 75-05-8 | X | ACTIVE | - |

Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component | CAS No | DSL | NDL | EINECS | PICCS | ENCS | ISHL | AICS | IECSC | KECL |
|--------------|---------|-----|-----|-----------|-------|------|------|------|-------|----------|
| Acetonitrile | 75-05-8 | X | - | 200-835-2 | X | X | X | X | X | KE-00067 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Component | CAS No | Weight % | SARA 313 - Threshold Values % | SARA 313 - Reporting thresholds |
|--------------|---------|----------|-------------------------------|---------------------------------|
| Acetonitrile | 75-05-8 | >95 | 1.0 % | - |

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

| Component | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|--------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Acetonitrile | - | - | X | X |

Clean Air Act

| Component | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|--------------|-----------|-------------------------|-------------------------|
| Acetonitrile | X | | - |

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

| Component | Hazardous Substances RQs | CERCLA Extremely Hazardous Substances RQs | SARA Reportable Quantity (RQ) |
|--------------|--------------------------|---|-------------------------------|
| Acetonitrile | 5000 lb | - | 5000 lb 2270 kg |

California Proposition 65 This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--------------|---------------|------------|--------------|----------|--------------|
| Acetonitrile | X | X | X | X | X |

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant Y
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Serious risk, Grade 3

Authorisation/Restrictions according to EU REACH

| Component | CAS No | REACH (1907/2006) - | REACH (1907/2006) - | REACH Regulation (EC) |
|-----------|--------|---------------------|---------------------|-----------------------|
|-----------|--------|---------------------|---------------------|-----------------------|

| | | Annex XIV - Substances Subject to Authorization | Annex XVII - Restrictions on Certain Dangerous Substances | 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|--------------|---------|---|---|--|
| Acetonitrile | 75-05-8 | - | Use restricted. See entry 75. (see link for restriction details) | - |

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component | CAS No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|--------------|---------|----------|------------------------------|---------------------------|--|
| Acetonitrile | 75-05-8 | Listed | Not applicable | Not applicable | Not applicable |

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Other International Regulations

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|--------------|---------|---|--|----------------------------|------------------------------------|
| Acetonitrile | 75-05-8 | Not applicable | Not applicable | Not applicable | Not applicable |

16. Other Information

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Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS